

DOCKET NO.: ISIS0171-100 (ISPH-0794)

PATENT

In the Claims:

The current status of all claims is listed below and supercedes all previous lists of claims.

1-16. (*cancelled*).

17. (*currently amended*) A method of selecting an effective antisense oligonucleotide sequence for inhibition of expression of a preselected target nucleic acid comprising:

providing a set of antisense oligonucleotide sequences 12 to 25 nucleotides in length which are complementary to a preselected target nucleic acid sequence;

selecting an antisense oligonucleotide sequence from a set of antisense oligonucleotide sequences, wherein the selected antisense oligonucleotide sequence comprises at least one activity-enhancing 5'-CCAC-3' oligonucleotide sequence motif selected from ~~5'-CCAC-3', 5'-CCA-3', 5'-TCCC-3', 5'-CCCA-3', 5'-CCCT-3', 5'-CCCC-3', 5'-ACTG-3', 5'-ATCC-3', 5'-CACC-3', 5'-GCCA-3', 5'-ATC-3', 5'-CAC-3', 5'-CTC-3', 5'-GCAT-3', 5'-ACCA-3', 5'-CATC-3', 5'-TCC-3', 5'-AAC-3', or 5'-CTCT-3'~~; and

no activity-decreasing 5'-GGGG-3' sequence motifs selected from ~~5'-GGGG-3', 5'-GGG-3', 5'-GGCT-3', 5'-TAAA-3', 5'-ACTG-3', 5'-GAAA-3', 5'-TGGG-3', 5'-AAAT-3', 5'-GGA-3', 5'-CTGG-3', 5'-ATAA-3', 5'-AATA-3', 5'-CCGG-3', 5'-ATA-3', 5'-GGAG-3', 5'-CTG-3', 5'-AAA-3' or 5'-AAA-3'~~.

Claims 18 - 31 (*cancelled*)

32. (*Withdrawn*) An antisense oligonucleotide produced by the method of claim 17.

33. (*Withdrawn*) An antisense oligonucleotide of claim 32, wherein said antisense oligonucleotide is chimeric.

34. (*Withdrawn*) An antisense oligonucleotide of claim 34, wherein said oligonucleotide comprises a 2'-methoxyethyl nucleoside modification.

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35. (*Withdrawn*) An antisense oligonucleotide 12 to 25 nucleotides in length targeted to a preselected target RNA, comprising:

at least one 2'-modified nucleoside; and

at least two activity-enhancing sequence motifs selected from 5'-CCAC-3', 5'-CCA-3', 5'-TCCC-3', 5'-CCCA-3', 5'-CCCT-3', 5'-CCCC-3', 5'-ACTC-3', 5'-ATCC-3', 5'-CACC-3', 5'-GCCA-3', 5'-ATC-3', 5'-CAC-3', 5'-CTC-3', 5'-GCAT-3', 5'-ACCA-3', 5'-CATC-3', 5'-TCC-3', 5'-AAC-3', or 5'-CTCT-3'.

36. (*Withdrawn*) An antisense oligonucleotide of claim 35, further having no activity-decreasing sequence motifs selected from 5'-GGGG-3', 5'-GGG-3', 5'-GGCT-3', 5'-TAAA-3', 5'-ACTG-3', 5'-GAAA-3', 5'-TGGG-3', 5'-AAAT-3', 5'-GGA-3', 5'-CTGG-3', 5'-ATAA-3', 5'-AATA-3', 5'-CCCG-3', 5'-ATA-3', 5'-GGAG-3', 5'-CTG-3', or 5'-AAA-3'.

37. (*Withdrawn*) An antisense oligonucleotide of claim 35, wherein said antisense oligonucleotide is chimeric.

38. (*Withdrawn*) An antisense oligonucleotide of claim 35, wherein said oligonucleotide comprises a 2'-methoxyethyl nucleoside modification.

39. (*new*) The method of claim 17, further comprising synthesizing test antisense oligonucleotides having said antisense oligonucleotide sequences.

40. (*new*) The method of claim 39, wherein said test oligonucleotides are chimeric oligonucleotides.

41. (*new*) The method of claim 40, wherein the test oligonucleotides each have at least one 2'-substituted nucleotide.

42. (*new*) The method of claim 39, further comprising testing the test oligonucleotides in vitro for their ability to modulate the preselected target nucleic acid.